1:Beaglehole and Beaglehole E-5 (1934-5)1938 Pukapukans

283 sennit *malos*. Four-ply braid is not used for cordage. Braided sennit is termed *kawa*. Sennit made from the selected, long pieces of fiber is *kawa usu;* from unselected strands (*amo*), *kawa wili*. Ordinary three-ply braiding which produces a fairly long, loose braid is termed *kawa wili yasyas* and is used for ordinary anchor line (*kaunau*) or fishline. Careful three-ply braiding, in which each twist of the plies is pulled very tight to form a close, round braid, is termed *kawa wili tuki;* when made of the long strands (*usu*), it produces especially strong braid used for strong fishlines and canoe lashings.

Braiding is always done toward the body. The commencement end of the plies is knotted and tied to a stake set in the ground before the worker or else coiled round the toe (*iho hi te mangamanga tae*). In three-ply braid, the outside plies are brought over the middle ply in succession, each ply taking in turn the middle position. A shortening or thinning ply is reenforced by direct overlapping on the specific ply affected or else by the addition of a new strand from below, the short end of which is folded back over the middle ply (fig.18*b*). When it is temporarily abandoned, the braiding is stoppered by twisting plies together or by tying the two outer plies together with an overhand knot. Braiding is permanently finished by gradually reducing the size of the strands until they are very thin and then rolling the three plies together on the sole of the foot to produce about 3 inches of three-ply twist. Shreds of fiber (*uruhuruhu*) left on the cord after braiding is finished are carefully cut off with a knife (*tabu*) to give a smooth, neat appearance to the cord.

[804] Finished cord is measured by stretching it from tip to tip of outstretched arms across the chest. One such measurement is equal to a fathom (*ngawa*). When the worker has made a sufficient number of *ngawa* for his purposes, he winds the cord into a coil of fathom loops and stores it until needed. Lengths of cord for canoe lashings are made fairly short because the cord must be used uncoiled when lashing through holes in the canoe hull. Working coils for house lashings are made by winding the sennit over the back and palm of the hand. The sennit is taken from the hand, the free end is wound several times round the middle of the coil and fastened with half hitches. The commencement end is pulled from the center of the coil and the lashing started with this end. As the lashing proceeds the coil unwinds itself, but the coiling prevents the sennit from becoming tangled and hard to use.

Examples of three-ply braided cords for various purposes are:

Anchor line CB298 (*kawa tau*): three-ply braid, 6 mm thick, 11 mm wide. The plies thin down to 4 × 2 mm at the finishing end and are twisted into two plies (two plies being twisted as a single element) for 2½ inches and knotted.

Other lengths of braid used as deep-sea fishlines and anchor lines (CB107, CB199, CB298), have thicknesses of 4 × 7, 4 × 8, and 5 × 10 mm. They are all loosely braided pieces of sennit (*kawa wili yasyas*).

Canoe lashing sennit CB109 (*kawa usu hi vaka*) is a flat three-ply braid, in which each ply is composed of 13 long coconut fibers. Short plies are lengthened by direct overlapping, the slight backward projection of the short end of the added strand being trimmed off later. The finished braid is 3 mm thick, 6 mm wide; the flatness and strength of this braid make it ideal for lashing together hull parts.

283 292 Five-ply (*wili lima*) braiding is reserved exclusively for the making of sennit *malos* (*kawa malo*). The braiding technique is similar to three-ply braiding save that the outer ply from either side crosses two plies instead

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Ipu, coconut shells: ipungaulu, 10; ipulua, 20; ipuwelau, 100; ipuluangalau, 200.
Kai, fishhooks, used when counting the number of hooks on a composite fishing apparatus (tamakomako): kailima, 5 hooks. The number of fish caught with this apparatus is also counted with the prefix kai, as kailima ika, 5 fish.
Kau, oven stones, fishline sinkers, leaves of prepared pandanus for plaiting: kaulua, 20; kauwelau, 100; kautolungalau, 300.
Kaui, fishhooks stored in the special tuluma receptacle, or hooks on a bonito trolling rod: kaitolu, 3 bonito hooks.
Kupu, plaited objects such as mats, hats: kupungaulu, 10; kupulua, 20; kupuwelau, 100.
Lau, fish caught by ordinary methods, or live fish: laungaulu, 10; lau lua, 20; lau, 100.
Manga, branches, livers (internal organs), bananas, or fingers: mangangaulu, 10.
Mata, talo, or pulaka: matangaulu, 10 tubers; matalua, 20; matawelau, 100 tubers.
Mata, meshes in a net: matalungalau, 200 meshes.
Tua, crayfish or crabs: tuangaulu, 10 crayfish; tualua, 20; tuawelau, 100.
Ua, shellfish; uangaulu, 10 clams; ualua, 20.
Utu, victories in a progressive game: ututolu, 3 wins in disc-throwing game (tupe).
Yeke, canoe seats: yekeono, 6-seater canoe.

These counting prefixes are also used in questions inquiring the number counted, as: *E tinowea te tangata?* How many people? *E matawea te mauna?* How many talo corms? *E yekewea te vaka?* How big is the canoe? The answer uses the prefixes as given above.

804 Measurements of length are commonly used for fishlines, or in craft activities. Those in common usage are:

Watinga mangamanga lima: length of one finger joint, tip of finger to first joint.
Lua watinga mangamanga lima: two finger joints.
Tolu watinga mangamanga lima: three finger joints, i.e., one finger length.
Ngawa mangamanga lima: span of hand from thumb to longest finger.
Watinga lima: finger tip to elbow joint.
Lima: finger tip to shoulder of outstretched arm.
Uma: finger tip to center of chest with outstretched arm.
Ngawa: tip to tip of fingers, with outstretched arms, across chest; tolunga ngawa, three lengths, and so forth.
Kumi: a length of 10 ngawa.
Lau: 100 ngawa; E wea te loa o te mea la? E lau; What is the length? 100 ngawa.

Measures of volume are made by the use of descriptive terms:

Mo mea lewa: a very little.
Lewa: a little.
Mo mea: a little more.
To ki: (a container) about ¼ full.
To kiki: between ¼ and ½ full.
To kiki ki loloto: about ½ full.
Ki: full.
Ki kakale: brimful.
Ki kalekale: full to flowing over.

There are no standardized measures for volume; the liquid which is being described is added to the descriptive term to make clear the amount of liquid measured.